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From: Steve Christensen
To: Richard B. White
Date: 2/26/2007 2:05:38 PM
Subject: Emery IBC Task #2749

John and Richard,

I'm attaching my deficiencies from our most recent technical analysis. I'm well aware of the time constraints that you're under so I'm sending these to you now so that we can start working through these remaining issues.

I have four remaining deficiencies. I don't believe any of them will require significant amounts of time to address. However, in light of the proposed full extraction mining and the overburden in the area, there are a few issues that I'd like to discuss with you further.

Take a gander at the deficiencies and give me a call at your earliest convenience.

Thanks,
Steve

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CC: John Gefferth; Pam Grubaugh-Littig

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R645-301-121.200, The Permittee should address the language regarding Plate V-20 on page 5 in Chapter XIII. The bottom of page 5 of the submitted Chapter XIII states, "Based on data provided on Plate V-20 of the approved MRP, approximately 300 to 500 feet of overburden overlies the IJ zone within the IBC area". Upon inspection of the plates, Plate V-20 depicts the overburden of the UI zone. Plate V-19 depicts the J seam geology. The Permittee should provide clarification as the submitted information refers to the IJ zone/seams. Discuss or clarify the relative overburden thicknesses within the proposed IBC area for the UI zone and J zone.

R645-301-728, The Permittee should discuss and provide further clarification that the PHC assessed potential impacts anticipated from implementing full extraction coal mining as opposed to room and pillar. It is not readily apparent to the reader that the PHC was produced relative to full extraction mining. Within the PHC section, the Permittee should provide (where applicable) explicit clarification, narrative and supporting evidence as to what the potential impacts from implementing full extraction mining and subsidence will have on ground and surface water resources in the proposed IBC area. For example, the second to last paragraph on page 8 of Chapter XIII states that the Ferron Sandstone discharges by "wells, by dewatering of the Emery Mine, by seepage into Quitcupah Creek and Christiansen Wash". Discussion of full extraction mining and potential subsidence related impacts on baseflow to the Christiansen Wash, Quitcupah Creek and other surface water features (such as wetlands) would be one issue that should be further discussed relative to full extraction mining.

The PHC should also discuss the potential for the irrigation ditches and stock watering ponds located in and adjacent to the IBC to be impacted by full extraction. Plate V-5 depicts 3 feet of subsidence in the areas of the irrigation ditches and stock watering ponds. Further discussion should be provided as to the potential for these hydraulic systems to be impacted. The explanations and discussion may be brief. However, the dots need to be connected (beyond inflows to the mine) within the PHC as to what impacts (if any) are anticipated to hydrologic resources as a result of full extraction mining in the proposed IBC area. In light of the coal seam thicknesses to be mined and the relatively small amount of overburden (300-500 feet), the potential exists for subsidence related impacts on surface and ground water resources in the area of the IBC and surrounding areas.

R645-301-525, The Permittee should provide a more detailed and rigorous monitoring program to determine if subsidence has impacted the irrigation and stock watering network located within and adjacent to the IBC area. In light of the relatively small amount of overburden in the area (300-500 feet) and the projected subsidence depicted in these areas on Plate V-5, there is a potential for subsidence to impact these surface features.

R645-301-525.480, The Permittee should provide a more detailed explanation and discussion of specific measures that will be implemented in the event that subsidence impacts the drainage

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network located within and immediately adjacent to the proposed IBC area. Page 13 of Chapter XIII and pages 41 and 42 of the approved MRP generally discuss timetables and how the Permittee will negotiate with landowners regarding mitigation efforts; however, in light of the potential for subsidence relative to full extraction (See Plate V-5), the Permittee should be more specific as to what measures will be taken in the event that ditch gradients are altered or fractured, stock watering ponds fail etc...

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